

# Department of the Interior Departmental Manual

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**Effective Date:** 10/27/04

**Series:** Special Programs

**Part 753:** Dam Safety and Security Program

**Chapter 2:** Program Requirements

**Originating Office:** Bureau of Reclamation

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## 753 DM 2

**2.1 Bureau Dam Safety and Security Programs.** This chapter provides the requirements for a bureau dam safety and dam security program.

**2.2 Designated Official.** Each bureau is responsible for designating an official(s) with knowledge and experience in dam operations, maintenance, security, evaluation, design, construction, modification, rehabilitation, and emergency management. The Designated Official should also have knowledge of the administrative, technical, and regulatory practices related to dams. The responsibilities of the Designated Official include:

A. Implementing, developing, operating, and managing the bureau dam safety and security programs consistent with Departmental policies, the authorities listed in 753 DM 1, and any other applicable Federal guidelines or directives for the bureau's existing dams and any newly acquired or constructed dams.

B. Performing all planning, design, construction, and operations, maintenance, and security of dams by technically qualified personnel, in accordance with all applicable Federal and Departmental dam safety and security guidelines.

C. Serving as the bureau lead contact for Interior dam safety and security intra- and inter-agency coordination. Coordinating bureau dam safety and security program development and operation with the Working Group on Dam Safety and Security (see 753 DM 1.7A).

D. Advising the bureau head on implementation of the bureau's dam safety and security programs, including budgeting and funding of program activities to reduce the risks associated with dams, and delineating clear personnel requirements and costs associated with dam safety and security during the budget formulation process.

E. Developing and maintaining a common approach to dam safety and security throughout the bureau, and providing and maintaining an adequate level of safety and security for their bureau's dams.

F. Assuring that the technical and engineering aspects of dam safety and security are adequately considered throughout the development, design and operation of dam projects.

**2.3 Policies and Guidelines.** Each bureau will develop policies and guidelines necessary to implement its dam safety and security programs.

**2.4 Prioritization.** Bureaus will prioritize dam safety and security programs to obtain maximum risk reduction benefits. Risk encompasses natural and manmade (accidental or intentional) events, the response of the dam to those events, and the consequences of an adverse response to the event(s). Funding should be prioritized to prevent failure or compromise of dams, assure that bureaus understand the risks associated with their inventory of dams, and to take risk reduction actions at dams with the greatest potential of risk.

**2.5 Decision-making.** Bureaus will establish processes for making decisions about continued operations of dams, the need for dam safety or security modifications, for breaching dams, if appropriate, and for reducing the potential for dam failure or consequences through changes to dam operations. These decisions should be documented and integrated into operations and funding processes for the bureau dam safety and security activities.

**2.6 Facility Information Security.** Any information about dam safety and security, which, either alone or in the aggregate, is deemed sensitive in nature, must be protected in accordance with the magnitude of its loss or the harm that could result from inadvertent or deliberate disclosure, alteration or destruction of such data. Correspondingly, information that warrants a degree of protection, shall also meet appropriate administrative controls that meet the criteria for exemption from public disclosure set forth under Sections 552 and 552a of Title 5, United States Code: the Freedom of Information Act and the Privacy Act.

**2.7 Inventory.** Bureaus will maintain an inventory (or database) of dams for which the bureau is responsible, including low-hazard dams. The inventory will include permitted dams (dams that are privately owned but sited on Interior lands) and information necessary for the periodic updating of the National Inventory of Dams when it is requested by the U.S. Army Corps of Engineers. It should also include appropriate statistical, structural performance, hazard classification, and identified deficiency data on all storage and diversion dams.

**2.8 Hazard Classification.** Bureaus will classify each dam in their inventory in accordance with applicable DHS/FEMA guidelines for hazard classification of dams. Each bureau should reassess the classification of all inventoried dams (including low-hazard dams) every 5 years to determine if a change in hazard classification is warranted.

**2.9 Dam Evaluation.** Evaluation of bureau dams will consist of the following:

A. Inspection/Assessment. High- and significant-hazard dams will be periodically inspected or assessed in accordance with the *Federal Guidelines*, and other technical and security vulnerability standards as set forth by bureau policy. The formal inspections/assessments will be documented in a written report including photographs, descriptions of conditions, and recommendations for bureau actions to address dam safety and security concerns. Dams should

be re-inspected and assessed as necessary, and a formal inspection and reevaluation conducted at least every 5 years. All newly acquired dams will receive an initial inspection and evaluation prior to their acquisition.

(1) Inspection/assessment for low-hazard dams will be in accordance with the *Federal Guidelines*, bureau guidance for the examination of physical facilities.

(2) Examinations of low-hazard dams will be performed by qualified and experienced professionals in the inspection and assessment of dams and their condition.

B. Monitoring. Dams will be monitored as appropriate to assure that any significant changes in performance related to mis-operation or potential failure modes, as well as security compromise, can be detected and addressed in a timely fashion.

C. Evaluation and Analysis. Deficiencies noted as a result of inspections or vulnerability assessments will be appropriately addressed. Priorities for correction will be assigned in accordance with the relative level of failure potential and downstream consequences. When dam safety or security concerns are identified from the inspection/assessment or monitoring activities, bureaus will collect appropriate data, analyze the condition of the dam and evaluate risks with the intent to maximize safety and security. Recommendations should be made to the appropriate decision makers on improvements in practices or modifications to dams, when evaluation reveals safety and/or security-related deficiencies. Decisions on required future action (or lack thereof) will be documented.

D. Records Management - Storage of Information. Documentation of the inspections, assessments, monitoring data, evaluations and analyses constitute important dam safety records which need to be appropriately preserved. Each bureau will establish appropriate records management systems for capturing and preserving these records. Bureaus must establish criteria for the protection of sensitive information concerning the Critical Infrastructure Protection program and related information to ensure that data and information on mission essential infrastructure and vulnerabilities are protected from harmful and/or unauthorized disclosure. Information not associated with critical infrastructure will be evaluated to determine the appropriate protective measures to avert unauthorized disclosure.

**2.10 Dam Modifications.** When structural modifications are determined to be the reasonable course of action for reducing risk, the design and construction of such modifications will be in accordance with the *Federal Guidelines*, and utilize proven and accepted technical criteria. Any modifications should be closely coordinated through all stages of construction with designer involvement and attention to site-specific conditions. In addition to the requirements of the *Federal Guidelines*, the responsible operations and design offices in the bureaus most will closely monitor the initial filling of new or modified dams to assure that the new features perform as expected.

A. Independent dam safety and security reviews will be performed by an entity outside of the responsible bureau for all dam modification designs. The review frequency, thoroughness, and the number and expertise of the reviewers will be commensurate with facility size, issue

complexity, modification cost, and dam failure and potential consequences. Any decision that an independent review is not required for a project will be documented by appropriate bureau decision makers. A Federal technical review will be performed if the designer or record is a non-federal entity.

B. The designer of the modifications will develop a first filling plan and shall participate in the monitoring of the facility during the construction period and the initial reservoir filling following structural modifications. An Emergency Action Plan (753 DM 2.12C) will be prepared before commencing the initial filling.

C. Any dam modification which requires construction should include consultation with bureau security officials during the initial survey/design stages, so as to allow the potential inclusion of appropriate physical and technical security systems within the scope of projects.

**2.11 Operation and Maintenance.** Operational instructions will be developed for each high and significant hazard dam. A dam operation logbook will be used to record information about the dam operations, maintenance, and dam safety and security activities. Recommendations for required maintenance will be recorded and tracked to assure that it is planned and performed in a timely manner. Bureaus will monitor the performance of their dams with both routine visual inspections and the collection and evaluation of instrumentation data as appropriate to detect developing potential failure modes.

**2.12 Emergency Management.** Emergency management procedures will include as a minimum:

A. Incident Response. Dam safety incidents such as increasing seepage, embankment or abutment slides, large floods, or significant earthquakes will be immediately investigated by bureau dam safety officials. Correspondingly, dam security incidents such as felonious criminal acts, potential surveillance activities, unusual or unlawful conduct by employees or visitors will be immediately reported to bureau security and/or law enforcement officials for follow up investigation and/or mitigation action.

B. National Response Measures. Bureaus will prepare Homeland Security Advisory System Response Measures for each high and significant hazard dam in accordance with the DHS levels of national alert. Response measures will be designed to effectively reduce the likelihood of a successful attack. Response measures will be selected based on facility priority and security inspection and/or assessment reports.

C. Emergency Action Plans. Bureaus will prepare Emergency Action Plans (EAP) for each high and significant hazard dam to provide effective detection, decision making and notification during emergencies. The EAP shall be in accordance with FEMA document 64 (Federal Guidelines for Dam Safety: Emergency Action Plans for Dam Owners). Each EAP will:

(1) Be developed in consultation and cooperation with appropriate Federal, State, tribal and local agencies responsible for law enforcement, emergency operations plans, early flood warning systems, and public safety;

(2) Be designed to provide early warning to upstream and downstream inhabitants, operators of water-related facilities, recreational users, and other persons in the vicinity who might be affected by a project emergency;

(3) Take into account the time of day, particularly hours of darkness, in establishing the proper actions and procedures for use during a project emergency.

D. Posting and Readiness of EAPs should be implemented as follows:

(1) A copy of the appropriate EAP will be posted in a prominent location, readily accessible to operating and emergency notification personnel.

(2) Each bureau will test annually the state-of-training and readiness of key personnel responsible for responding to a project emergency.

(3) Copies of EAPs should be provided to appropriate Federal, tribal, State, and local jurisdictions with responsibility for law enforcement, early flood warning, evacuation, search, rescue, and recovery.

E. Review and Updating of EAPs will be performed at least annually. The bureaus have continuing responsibility to review and revise each EAP in light of any significant changes in upstream or downstream circumstances which might affect water flows or the location or extent of the areas, persons, or property that might be harmed. Also, the review and update should make any changes in notification of personnel, procedures, phone numbers, etc. In addition to the annual reviews and updates, the EAPs will be tested every 5 years to assure that the plans would function satisfactorily in the event of an actual emergency.

## **2.13 Facility Security Plans.**

A. Bureaus will prepare comprehensive Facility Security Plans (FSP) for each high and significant hazard dam to provide the description of the facility vulnerabilities, security status, and effectiveness of protective measures at various higher alert levels, and decision making and notification protocols to be used during security emergencies. The FSP will clearly identify physical, technical, and procedural security systems. Additionally, the FSP should delineate bureau or office staff responsible for making security decisions.

B. Each FSP will be developed in consultation and cooperation with appropriate bureau or office security officials, Federal, State, tribal and local agencies responsible for security and law enforcement. The FSP will contain:

(1) Designation of the responsibility and authority for bureau or office personnel and stakeholders.

(2) Detailed plans for notifying potentially affected persons, appropriate bureau safety and security officials, as well as Federal, State, tribal and local agencies responsible for security and/or public safety;

(3) Provision for reporting emergency actions to the bureau head and the bureau dam safety officer and chief security officer.

(4) Provisions for coordination with the EAP.

C. Review and updating of FSP will be performed annually.

**2.14 Flood Plain Management.** Bureaus that have management responsibilities for lands downstream of dams should consider dam safety and security plans in their land use planning and zoning guidelines or policies. Where bureaus do not have such management responsibilities for land in potential inundation areas, operations personnel should work with local authorities responsible for land use planning to assist them in designating appropriate land uses in these areas. An inventory of such dams should be maintained to ensure awareness and coordination.

10/27/04 #3663

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